Risk is at the heart of every wind development, particularly offshore. No-one can be certain how hard the wind will blow, how the turbines will cope over the years or how difficult installation or maintenance will be. And with political instability and financial constraints in many countries, developers can no longer be sure they will actually receive the economic support promised by government.

But what if those risks could be removed at the stroke of a pen? What if a developer could guarantee the level of income from a wind farm and remove both the political risk and the hidden costs of unforeseen events? Innovative insurance companies are offering new products that could revolutionise the wind industry. Developers and contractors should pay closer attention, writes Leigh Collins in London.
“You can write a hedge that says if the number of bad days in a construction period is in excess of what I expect, I get compensation based on the £200,000-a-day cost of having that vessel just sit there for each of those non-working days. That is an intriguing prospect,” Brown tells Recharge that last winter a large offshore developer bought such insurance from Swiss Re for some geotechnical work. The developer asked contractors for two prices — the usual one, in which the contractor takes on all liability for weather delays, and one purely for the work itself, with the developer assuming liability. In this instance, the developer found it was cheaper to take out insurance rather than pay the contractor to assume the weather risk. “Among other things, this enabled the developer to get the work done during winter when they would not normally have contracted to do this stuff,” says Brown. “It actually paid them out very handsomely because it ended up being one of the toughest winters they’ve ever seen. So they got the work done, and they also got the compensation for having to take longer than they thought it would.”

Brown says this kind of insurance can be taken for each part of the offshore installation process — cables, foundations, turbines, substations, “anything where weather causes downtime problems.”

“Construction delays from bad weather are a huge risk,” he says, with heavy emphasis on the word ‘huge’. “The amounts involved are quite significant!”

Brown points to construction of the UK’s Greater Gabbard offshore wind farm, where weather delays were a major factor in the bankruptcy of cable installer Subsea and the £400m loss suffered by EPC contractor Foulou. Swiss Re’s insurance

wind farm in 2010, where a $400m loss was reported.

Brown believes the biggest market for this product will be the contractors themselves. “From the contractor’s point of view, he can go into a tender and say, ‘I will take all the weather risk, let’s not even talk about that, and he might get a piece of business that he wouldn’t otherwise get. So all he has to do is say, ‘Okay, my margin on this business, $20hm; my cost of the protection (insurance).’ Fine. That’s a no-brainer.”

Bullock says this product would particularly benefit smaller contractors as it would allow them to compete on a level playing field with larger competitors. “In order for the contractor to take on the weather risk, they would have to have a big balance sheet, so the big contractors can do that. The smaller ones, often cable-laying contractors and the like, have much less ability to do that.”

Bullock believes weather-related offshore construction insurance is not well understood by the industry, and Brown admits that few companies are currently buying this product — but they both believe it will take off.

“In small industries, by which I mean industries where the club is tight and everyone knows each other, if you do a reference deal, if you do a landmark transaction in an industry like that, I think it will catch on quite quickly,” says Brown.

Wealth-related volume risk

Swiss Re recently insured Australian wind developer Infigen’s entire output from its 557MW domestic portfolio, effectively guaranteeing how much revenue its wind farms will generate. “What they are doing is essentially fixing, through a financial contract, the equivalent of a steady stream of wind across their portfolio. They’ve contracted a product that, if there’s not much wind, they’re short of production and we pay them. If there’s a lot of wind, they have, in effect, windfall profits and they pay us.”

It is little wonder that Infigen wanted such insurance — in 2014 it suffered a 23% fall in revenue from its Australian wind farms due to lower wind speeds and a drop in wholesale energy prices. A similar situation occurred across the western half of the US in January from Texas to California, when wind speeds fell unexpectedly to 20% below the monthly average. But many developers, particularly
larger ones, are comfortable keeping the weather risk in house, factoring a financial buffer into their budgets. They may also have a portfolio that effectively acts as a hedge in itself — if the wind is not blowing in, say, Dormark, it may well be blowing hard in Texas, or vice versa.

As Brown points out: "Just because you can hedge something, doesn’t mean you should. If I can get paid a return for taking that wind risk and I’m comfortable with that, I’m going to keep it, thank you very much. I want profit, I want a clear benefit from paying Swiss Re a premium to take me away from that risk. So where does that clear benefit come from? If I get financing done that I wouldn’t otherwise get, or better bank terms or better bank terms, or I get financing done that I wouldn’t otherwise get, yes, that creates a benefit I can measure against the cost of buying the protection.

"Indigen is exclusively wind (aside from a 13MW demonstration PV/energy-storage plant), they don’t have a big balance sheet. They have a lot of debt, and low wind years are an existential threat to their business — so they can’t put up with many of those." Brown believes that this insurance product will be particularly attractive to companies that buy — or buy into — existing wind farms.

"Some of those three-party insurers are perfectly happy with assessing and understanding the wind risk. Most, however, and potentially a large amount of financials, don’t want to think about the wind risk, and would actually take a lower return if the wind risk were taken away from the project. That’s the other way as a seller of a project you can crystallise some value, because you can get investors in who wouldn’t otherwise accept the risk.

"Bullock believes this insurance will see significant take-up in the offshore sector, rather than onshore, due to the smaller portfolios.

"[Offshore] investments tend to be focused on one or two specific sites where you’ve got a large number of turbines," he says. "And increasingly, the capital coming in is quite often from pension funds and the like who are quite risk-averse. When they invest in these things they’re effectively looking for annuity returns, so they want a degree of certainty over how much they receive each year. To that end, I think such products should start to increase in popularity."

Political risk
"We’ve had issues in some Far Eastern countries — the Philippines, places like that — where either the local authority or the government have come along and said, ‘Yeah, nice [wind] project, but actually, we’re running it now,’" says Fraser MacLachlan, chief executive of specialist renewables insurer GCube. "And they will quite literally kick you out of the country and seize the asset. It’s a real risk and it is an exposure and there’s very little you can actually do about it."

GCube is offering tailor-made insurance products to protect developers and operators from so-called "political risk" — or, to use the industry’s terms — from confiscation, expropriation, nationalisation or deprivation.

This will protect developers against changes made by the authorities to power-purchase agreements, feed-in tariffs, or any subsidies that will be factored into a project’s business plan. "Certain governments are quite creative. They can change tax legislation in respect of certain types of projects, they can say turbine heights over are no longer allowed, they can change the feed-in tariff. "Some of the changes that you see

are radical, and they are the difference between profit and loss. We would insure against that — and that’s created quite a lot of interest."

And while standard wind farm insurance policies protect developers against terrorism, they tend not to protect against stoppages caused by the threat of terrorism or, indeed, local protests, says MacLachlan. GCube offers this protection. One GCube customer in Mexico could not get access to its site because local people were threatening the workers.

"The locals had organised themselves into a militia," says MacLachlan. "It happened. "These are quite well-defined insurance products, and they do work," says Bullock. "In the right territory, they’re certainly something that I would strongly recommend to clients."

Unscheduled O&M risk
When a turbine’s warranty period ends, operators take on the responsibility for ensuring it continues to generate power efficiently.

"But what if you discover that the turbine has a defect — and that you have another 99 machines that are likely to malfunction in the same way? Standard insurance would cover you against a broken part, but not one that is functioning but not running as well as it should. Standard insurance will also not cover all your losses. As MacLachlan explains: "Traditionally you’ll pay your first loss for a turbine at 100%, second one at 80%, and then 50, 25, 0%. If you’re going to find a problem with one turbine, it is 99% likely that it is going to develop in all the others. We’ve removed that serial loss exclusion."

"It’s stuff that catches you by surprise, it’s, ‘Holy moly, my pitch bearings are all wearing out way more quickly than I thought, therefore all my pitch bearings, at some stage, will need to be replaced.’"

"As a prudent business, you’ll probably have something in reserve for that on your balance sheet, and all we’re saying is, ‘Transfer your reserve from your balance sheet to our balance sheet’. We’ll free up that cash, but we’ll change a premium for it.”

This insurance is currently only available for the US onshore market, but GCube says it would consider offering it to any longstanding client onshore in any market. "It’s potentially a very valuable product," says Bullock. “There would definitely be significant interest in it.”

Offshore cover will benefit sector, even if companies don’t buy it

Weather-related offshore construction insurance is a wretched boon to the industry — regardless of whether or not developers and contractors actually take out the policies — according to Michael Bullock of Renewables Risk Advisers.

"Defining what constitutes a “bad day” and an acceptable weather window at each stage of construction requires a great deal of planning between contractors and developers, who might not otherwise take place, he explains.

Factors that need to be taken into account include wave height, wind speed and direction, and so on. And this is something that should be best practice for the industry."

"Quite often you would find that if you took a wind farm through the permitting process they might end up realising that the vessel that looked like the most expensive day rate cost actually be far cheaper than the others because it is capable of pinning through everything and getting to the site, where others might be stuck at shore for weeks and weeks. So you can put all these things into the risk-management context, which is a much healthier place for the industry, irrespective of whether there is any insurance taken out.”

"The weather is something that should be best practice for the industry."

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